

EPA - LABS FOR THE 21st CENTURY 2002 Conference

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Guidelines for Designing Laboratories for the Future

Michael R. Somin, Architect - Principal, Earl Walls Associates

INFRASTRUCTURE IS THE FOUNDATION FOR THE USE OF LABS IN THE FUTURE -

All of it working together

- PLANNING
- STRUCTURAL
- HEATING/COOLING/VENTILATION
- PLUMBING
- ELECTRICAL
- COMMUNICATIONS

I. PLANNING

- Building Configuration
- Floor Plate Design
- Exiting Requirements
- ADA Allowances

II. STRUCTURAL

- Floor Loading
- Floor to Floor Height
- Vibration Control
- Column Placement
- Floor Penetrations

III.

HEATING/COOLING/VENTILATION

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- Design Temperature
- Distribution Concepts
- Exchange Rates
- Controls
- Filtration

IV. PLUMBING

- Systems Distribution
- Water Systems
- Gaseous Systems
- Special Gas Systems
- Waste Systems

V. ELECTRICAL

- Lighting
- Power Distribution
- Energy per Square Foot
- Emergency Power

VI. COMMUNICATION

- Network Distribution
- Open Wire Management Systems

VII. LESSONS LEARNED

- Examples